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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/675,958 | 10/02/2003 | Kunihiro Shiota | 8013-1040-1 | 5898 |
| 466 | 7590 | 07/07/2005 | EXAMINER | |
| YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202 | | | PARKER, KENNETH | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2871 | |

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/675,958 | Applicant(s) SHIOTA, KUNIHIRO | |
| | Examiner Kenneth A. Parker | Art Unit 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 12 is/are rejected.
- 7) ☒ Claim(s) 5-11 and 13-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/14/04, 10/2/03, 5/11/04</u> | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al 6100954.

The reference shows regarding claim 1. A layered structure comprising: a transparent organic layer 159 having a planarized transparent organic surface and a hole; and a first transparent layer overlying said planarized transparent organic surface only except within said hole 181.

The reference shows regarding 2. The structure as claimed in claim 1, further comprising a second transparent layer, which has an electrical conductivity and extends over said transparent protection layer and on a bottom and side walls of said hole 131.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al 6100954 in view of Kozaki et al 4240710.

The reference shows regarding claim 12 a transparent liquid crystal display comprising:

- a first substrate 111;
- an inorganic inter-layer insulator layer extending adjacent to said first substrate 179;
- a transparent organic layer 159 having a planarized transparent organic surface and a hole, said transparent organic layer extending adjacent to said first substrate;
- a transparent protection layer 181 covering said planarized transparent organic surface except within said hole;
- a transparent pixel electrode layer 131 extending adjacent to said transparent protection layer and on a bottom and side walls of said hole; and a second substrate and liquid crystal between the first and second substrate (not shown, but discussed in in the column 1, lines 66- column 2, line 16).

However, regarding this claim, the primary reference lacks the first orientation film; and second orientation film adjacent to said liquid crystal and an opposite electrode film adjacent to said second orientation film.

The opposite electrode is inherent, as the device could not operate without it. So this limitation is met by the inherent nature of an opposite electrode in any LCD having the pixel structure of Kim.

The orientation layers were always used, and Kozaki evidences this discussing in column 1 "It is well known that in implementing the rubbing or evaporation technique is carried out so as to attain molecular alignment", and goes on "On a glass support 1 there is deposited a transparent conductive film....A SiO film or an alignment film 3 is further deposited" .

Therefore one of ordinary skill would have found motivation, suggestion or reason to modify the disclosure of Kim and place an alignment layer down on the electrodes as was conventionally done to enable creation of an alignment condition. The reference goes on to indicate that they have a method depositing multiple SiO layers including SiO₂ that gives stable and good alignment (column 3, lines 30-55). Therefore one of ordinary skill would further have found reason, motivation or suggestion to modify the primary reference to put down the multilayer SiO alignment layer including SiO₂ of Kozaki for the benefit stated above. As the primary reference Kim, employs an SiO₂

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layer as the protection layer, and the secondary reference adds an alignment layer over the pixel electrode and also in the hole, the combination then meets the limitation of claim 3 of having the second and third layers as the same material.

Therefore the reference as modified meets the limitations of claim 3 wherein said first and second transparent layers are made of the same material, and claim 4 where the material is indium tin oxide or silicon dioxide.

Election/Restrictions

Applicant's election without traverse of group 1 in the reply filed on 4/25/05 is acknowledged.

Allowable Subject Matter

Claims 5-11 and 13-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art taught or suggested A layered structure comprising: a transparent organic layer with a planarized transparent organic surface and a hole;

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and a first transparent layer overlying said planarized transparent organic surface only except within said hole, a second transparent layer, which has an electrical conductivity and extends over said transparent protection layer and on a bottom and side walls of said hole where (claim 13) the transparent protection layer and said transparent pixel electrode layer are made of the same material, or (5) where the first and second transparent layer are made of the same material and in first transparent layer comprises a transparent protection layer, and said second transparent layer comprises a transparent pixel electrode layer.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamaji 5721601

Kitagawa 6117792

Miyagaki et al 5094978


Sakamoto 5714790

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A. Parker whose telephone number is 571-272-2298. The examiner can normally be reached on M-F 10:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kenneth A Parker
Primary Examiner
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